

REMARKS

Reconsideration and allowance of the subject application are respectfully requested.

The Examiner maintains the anticipation rejection of claims 1-4, 6-10, 12-16, and 18 based on Hellberg et al. This rejection is respectfully traversed.

Regarding independent claim 14, Hellberg fails to teach the claimed switching unit that includes:

multiple alternating current (AC) radio frequency carrier signal generators including a first AC radio frequency carrier signal generator provided for and associated with a first of the at least two discrete signal values and a second AC radio frequency carrier signal generator provided for and associated with a second of the at least two discrete signal values.

The switching unit 5310 in Hellberg includes two direct current (DC) generators +U and -U that operate at zero Hertz. They are not AC or RF signal generators.

The single RF signal output from the mixer 5110 in Hellberg is used as a control signal (not an output signal) to select one of the optical switches 5330 and 5340. Thus, the Examiner's argument that Hellberg's RF signal output from the mixer 421 in Fig. 4 is an RF signal not relevant to this claim limitation. The quoted claim limitation relates to the switching unit 423 in Hellberg and not the mixer 421. It is this switching unit that the claim recites is supposed to "receive the digital signal" from the claimed quantifier. If the RF signal received in Hellberg's switch unit 423 is a claimed AC carrier signal, as the Examiner contends, then it is clear that the switching unit 423 lacks the claimed first and second AC radio frequency carrier generators. Why generate an AC carrier if the AC carrier is received?

In addition to not disclosing the claimed first and second AC radio frequency carrier generators, Hellberg lacks other claim features. For example, each switch in claim 14 is

controlled by a digital signal value (corresponding according to the Examiner to Hellberg's RF signal) to connect one of the first and second AC radio frequency carrier generators to the output line. (See the final "wherein" clause claim 14). This is simply not disclosed or suggested in Hellberg. As explained in previous responses, the RF signal in Hellberg is used as a control signal to select one of the optical switches 5330 or 5340 to connect one of the DC power supplies +U or -U to the output line P. The RF signal in Hellberg is not connected to the output line P, and the DC power supplies are not AC RF carrier generators.

With multiple features from independent claim 14 missing from Hellberg, the rejection of claim 14 and the claims dependent upon claim 14 is improper and should be withdrawn.

Claims 1, 3, and 6 recite generating "a first AC radio frequency carrier signal for a first one of the two discrete signal values and a second different AC radio frequency carrier signal for a second one of the two discrete signal values." As already explained, the RF control signal in Hellberg is not connected to the output line P. Moreover, the signals which are connected to the output line P in Hellberg are the DC power supply signals +U and -U. First and second AC RF carrier signals are not connected to output line P.

Claim 1 also recites that:

wherein in connecting the different corresponding AC radio frequency carrier signals to the output line, the times at which the connecting of any of the different AC radio frequency carrier signals is started or ended are chosen to coincide with a moment at which the respective AC radio frequency carrier signal is equal to zero or is close to zero to avoid energy losses during the starting or ending of the connecting.

The Examiner refers to page 13, line 3-10 of Hellberg. But this referenced text is not relevant with respect to the "wherein" clause recited above. Instead, this text simply describes the circuitry in Figure 5. If the Examiner maintains this rejection, the Examiner is requested to

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explain how this section in Hellberg corresponds to and discloses the quoted claim language above.

Accordingly, the Hellberg reference lacks features recited in each of the independent claims. This is not surprising because the claimed approach to generating a high-power modulated radio frequency signal on an output line is based on connecting different AC radio frequency carrier signals to the output line as opposed to connecting DC power supply signals to an output line as described in the Hellberg reference. The advantages of the claimed approach are described in the specification and have been highlighted in previous responses.

If the Examiner elects to maintain rejection of these claims based on Hellberg, the Examiner is requested to contact the undersigned for a telephone interview to discuss alternative claim wording.

Respectfully submitted,

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By: _____



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